38. (New) The apparatus according to claim 35, wherein the worktable comprises an insulating material, and portions of the worktable facing an atmosphere in the process chamber are covered with the conductive film.

39. (New) The apparatus according to claim 35, wherein the pedestal is attached to the process chamber by a fixing member which penetrates the casing of the process chamber, and the conduction structure is arranged such that the conductive film and a conductive portion of the fixing member are electrically connected to ground.

REMARKS

Favorable reconsideration of this application as presently amended is respectfully requested.

Claims 21-39 are presently active, Claims 1-20 having been canceled and Claims 21-39 having been added by the present amendment.

In the outstanding Office Action, Claims 1-4 and 6-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Deguchi et al (U.S. Pat. No. 5,665,167), in view of Shinohara (U.S. Pat. No. 5,612,144). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Deguchi et al in view of Shinohara and further in view of Frankel (U.S. Pat. No. 6,106,630). Claims 10-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Deguchi et al and Shinohara and further in view of Signer (U.S. Pat. No. 5,948,224). Claims 12-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Deguchi et al, Shinohara, and Signer and further in view of Shinji (Jap. Pat. No. 05198498). Claims 15-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Deguchi et al in view of Shinohara and further in view of Shinji. Claim 20 was rejected

under 35 U.S.C. § 103(a) as being unpatentable over Deguchi et al, Shinohara, and Shinji, and further in view of Signer.

Firstly, Applicants acknowledge with appreciation the courtesy of Examiner Kackar to conduct an interview on October 25, 2002. During the interview, proposed new claims and the applied prior art, particularly the references of Deguchi et al and Shinohara, were discussed. It was argued that none of the applied prior art references or combinations thereof provide any suggestion or motivation for a conduction structure having a conduction route that includes a conductive film formed on a surface of the worktable and formed along the pedestal. Examiner Kackar disagreed and asserted that Shonohara taught depositing a ceramic conductive film over the entire interior of the vacuum chuck for the purpose of removing electrification from the vacuum chuck. We pointed out that the high resistivity range and thickness of the ceramic film in Shonohara are not well-suited for the worktable of Deguchi et al, and thus the references are not properly combinable (i.e. only being motivated by impermissible hindsight). No agreement on the merits was reached.

In light of the interview and in order to expedite prosecution of the present application, submitted herewith are new Claims 21-39 which are similar to original Claims 1-20. In independent Claim 21, a portion of the subject matter in original Claims 1 and 6 and an additional feature of a conductive film electrically isolated from a casing of the process chamber have been included. The additional feature, as discussed below, is supported in the specification. In independent Claim 35, a portion of the subject matter in original Claims 1, 6, and 18 has been included.

As such, independent Claim 21 defines a conduction structure configured to conduct static electricity generated on a worktable of a processing chamber to a grounded portion outside the process chamber, the conduction structure having a conduction route of the static

electricity including a conductive film formed on the worktable, formed on the pedestal, and electrically isolated from a casing of the process chamber. Independent Claim 35 defines a conduction structure arranged such that a conductive film formed on the worktable and pedestal and a conductive portion of the casing are electrically connected to ground.

In the single substrate processing apparatuses defined in Claims 21 and 35, static electricity generated on a worktable is conducted through a conductive film formed on the surface of the worktable and the pedestal, and then discharged to a grounded portion outside the process chamber. Applicants submit that since the single substrate processing apparatuses require no conductive mount plate (as conventionally used), the single substrate processing apparatuses of Claims 21 and 35 reduce conventional problems by reducing the complexity of superstructures added to the worktable, thereby reducing the difficulty and cost of maintenance operations for the single substrate processing apparatuses. Furthermore, Applicants disclose that:

> ...in the apparatus shown in Figure 3, the conductive film 10 formed on the worktable 3 and the pedestal 5 is electrically isolated from the casing 2a of the process chamber 2, and is grounded through the conductive nuts and bolts 34 and 33, and the ground line 35. Accordingly, static electricity generated on the wafer W and the worktable 3 during a process is conducted and removed, ***without passing through the casing 2a*** of the process chamber 2. As a result, the static electricity generated on the wafer W and the worktable 3 does not affect the conditions of the casing 2a of the process chamber 2.[3] [emphasis added]

Thus, the claimed structures in Claims 21 and 35, being in Claim 21 electrically isolated from the casing of the process chamber and in Claim 35 having a conductive film and a conductive portion of the casing electrically connected to ground, permit discharge of static electricity

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[3]Specification, page 16, lines 10-21.

from the worktable without affecting chamber processing, such as for example the disclosed ozone decomposition by UV irradiation.[4]

Deguchi et al disclose a structure in which lifter pins for assisting loading/unloading of a wafer are made of a conductive material, and electrical charge on the wafer is released through the lifter pins.[5] The Office Action acknowledges that Deguchi et al do not disclose a conductive structure to be a conductive film.[6] The Office Action states that Shinohara discloses materials for removing electrification (static).[7] The Office Action then asserts that it would be obvious to provide for a conductive layer on the susceptor and pedestal connected together and connected to ground so as to inhibit build up of charge on these surfaces.[8]

As acknowledged in the Office Action, Deguchi et al do not disclose a conductive film, and thus do not disclose or suggest a conductive film electrically isolated from the casing of the process chamber, as defined in Claim 21, or a conductive film and a conductive portion of a casing electrically connected to ground, as defined in Claim 35.

Shinohara discloses a ceramic on a surface in contact with a target substrate to remove electrification.[9] However, Shinohara does not disclose a casing or a process chamber, and therefore does not disclose or suggest a conductive film electrically isolated from a casing of the process chamber, as defined in Claim 21, or a conductive film and a conductive portion of the casing electrically connected to ground, as defined in Claim 35.

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[4]Specification, page 13, lines 5-13.

[5]Deguchi et al, col. 5, lines 7-11.

[6]Office Action, page 2, lines 18-19.

[7]Id., page 2, lines 19-20.

[8]Id., page 2, lines 25-28.

[9]Shinohara, see Abstract and Figure 1.

While arguable whether or not it is obvious to provide a conductive layer on the susceptor and pedestal, as asserted in the outstanding Office Action, neither Deguchi et al nor Shinohara provides any disclosure which would suggest that a chamber process is affected by improper discharge of static electricity. Thus, it is respectfully submitted that there is no suggestion or motivation in Deguchi et al or Shinohara for electrically isolating the conductive film from the casing, as defined in Claim 21, or for grounding both a conductive portion of the casing and the conductive film, as defined in Claim 35.

With no teaching or suggestion in the applied prior art for a conductive film formed electrically isolated from a casing of a process chamber or for a conductive film and a conductive portion of the casing electrically connected to ground, it is respectfully submitted that Claims 21 and 35 and the claims dependent therefrom patentably define over the applied prior art.

Consequently, in view of the present amendment and in light of the above discussions, the outstanding grounds of rejection are believed to have been overcome. The application as amended herewith is believed to be in a condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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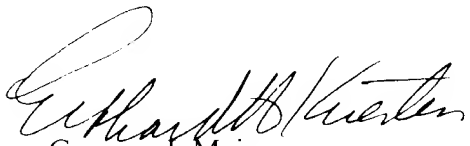

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IN THE SPECIFICATION

Please amend the paragraph on page 10, beginning at line 14, as shown below:

The casing 2a of the process chamber 2 is constituted of upper and lower casing parts, which are detachably joined at a position close to the middle in the vertical direction. The upper casing part, in which the worktable 3 is disposed, has a diameter larger than that of the lower casing part, in which the pedestal 5 is disposed. The casing 2a of the process chamber 2 has a ceiling, which is formed of an openable or detachable lid 11. The lid 11 has an opening 12 having a size larger than that of the worktable 3 at a position opposite to the worktable 3. A ring showerhead 13 made of quartz is disposed near the opening 12, and is connected to a gas supply section 13a for supplying a process gas containing an oxidizing gas, such as ozone (03). The showerhead 13 is provided with a number of gas spouting holes [14], which are formed at the bottom to spout a process gas, such as ozone, toward the wafer W on the worktable 3.

Please amend the paragraph on page 12, beginning at line 24, as shown below:

Then, the wafer W is heated to a predetermined process temperature by the resistance heater 4 disposed in the worktable 3. The process chamber 2 is supplied with ozone gas, i.e., a process gas, while the process chamber 2 is exhausted, so that the interior of the process

chamber 2 is kept at a predetermined process pressure. The ozone gas is spouted from the holes [14] of the showerhead 13 toward the wafer W on the worktable 3. At the same time, the UV lamps 17 in the lamp chamber 16 are turned on to emit UV rays. The UV rays are radiated onto the process gas containing ozone as the main component, above the worktable 3 in the process chamber 2. The ozone is decomposed into oxygen and oxygen radicals, due to irradiation with the UV rays. The wafer W on the worktable 3 is subjected to a predetermined process, i.e., oxidation, with the oxygen radicals.

IN THE CLAIMS

Claims 1-20. (Canceled).

Claims 21-39. (New).